

A NEW SPECIES OF *MENODORA* (OLEACEAE) FROM THE SIERRA MADRE OCCIDENTAL IN EASTERN SONORA, MEXICO

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ABSTRACT

A new species, *Menodora yecorana* T. Van Devender & B.L. Turner, is described from near Yécora, Sonora, México. It is closely related to *Menodora potosiensis*, a localized endemic of eastern San Luis Potosí, México, sharing the general habit, stem shape and opposite leaves of that species, but differs markedly in its glabrous stems and acicular leaves.

KEY WORDS: Oleaceae, *Menodora*, México, Sonora, systematics

The junior author (Turner 1991) provided an overview of the North American species of *Menodora* in which fourteen species were recognized. The present novelty will key in his treatment to *M. potosiensis* Henrickson ex B.L. Turner, a localized endemic of San Luis Potosí, México, but differs in several characters, as noted in the diagnosis.

The only other species of *Menodora* known to occur in the general region where *M. yecorana* is found is *M. scabra* Engelm. ex A. Gray, the latter readily distinguished from the former by its alternate leaves and terete-angulate stems. Because of its bright, highly floriferous, suffruticose habit it is worthy of cultivation as a xeriscape plant.

**MENODORA YECORANA** T. Van Devender & B. L. Turner, *spec. nov.* Figure 1. TYPE: MEXICO. Sonora: 3.4 km N of Yécora on road to Agua Blanca; two plants on west facing canyon wall in oak woodland among volcanic hilltops; 28°29' 35" N, 108° 55' 11" W, 1520 m, 15 Jul 1997, A.L. Reina G. et al. 97-752



*M. yecorana* Vandermeulen  
+ B. L. Turner

PLANTA EN THE HERBARIUM OF THE UNIVERSITY OF TEXAS AT AUSTIN

**Menodora**

1. 4 km north of Yecora, Coahuila de Zaragoza, Mexico  
 2. 1000 m, 24° 00' N, 105° 11' W, 1530 m  
 3. 1000 m, 24° 00' N, 105° 11' W, 1530 m  
 4. 1000 m, 24° 00' N, 105° 11' W, 1530 m  
 5. 1000 m, 24° 00' N, 105° 11' W, 1530 m  
 6. 1000 m, 24° 00' N, 105° 11' W, 1530 m  
 7. 1000 m, 24° 00' N, 105° 11' W, 1530 m  
 8. 1000 m, 24° 00' N, 105° 11' W, 1530 m  
 9. 1000 m, 24° 00' N, 105° 11' W, 1530 m  
 10. 1000 m, 24° 00' N, 105° 11' W, 1530 m

Figure 1. Holotype of *Menodora yecorana*.

(HOLOTYPE: TEX.; Isotypes: ARIZ,CAS,MEXU,RSA; Topotypes: 23 Sep 1997, *Reina 97-1188* [ARIZ,ASU,MO,NY,TEX,UCR]).

Similar *M. potosiensis* Henrickson ex B.L. Turner sed glabra aut paene glabra (non dense hispida), foliis acicularibus (non ovatis aut lanceolatis), et tubis calycum ca. 4 mm longis (non ca. 2 mm longis).

Stiffly erect subshrubs 40 cm high or more. Stems markedly 5 or 6 sided, glabrous throughout or nearly so. Leaves opposite throughout, acicular, gradually reduced upwards, those at midstem 20-30 mm long, 0.5-1.0 mm wide, mostly glabrous but the margins often minutely ciliate along the upper one-third. Flowers mostly axillary on erect, glabrous pedicels 7-16 mm long. Calyces 9-10 mm long, glabrous; tubes ca. 4 mm long; lobes 7-9, linear-lanceolate to linear-oblongate. Corollas bright yellow, glabrous without; tubes 5-6 mm long, pubescent within near the throat; lobes 12-14 mm long, 4-5 mm wide. Capsules oval, 5-7 mm long ( $\bar{x}=6.0$  mm, N=13), 2.5-4.5 mm wide ( $\bar{x}=3.8$  mm, N=13). Fruit persisting on shrub, 2/3 circumerose on surfaces between fruit pairs; in some pairs, one fruit larger than others, occasionally only one side developing; 1-4 seeds per capsule ( $\bar{x}=2.1$ , N=21); seeds convex externally but range from terete to triangulate to hemispherical, depending on the number of seeds/capsule.

The new *Menodora* is apparently rare, as only two plants were discovered at the type locality, or in similar volcanic ash hills both east and west of Yécora. The vegetation at the type locality is a sparse oak woodland with *Quercus chihuahuensis*, *Juniperus deppeana*, *Dasyllirion* sp., *Erythrina flabelliformis*, *Opuntia robusta*, and *Senecio carlomasonii*. Relatively bare bedrock areas just above supported *Agave polianthifolia*, *Pectis vandevenderi*, and *Tridax yecorana*.

*Menodora yecorana* superficially resembles *M. scabra* of lower elevations of the Sonoran Desert but, as already noted, is readily distinguished from the latter by its alternate leaves, among other features. Its closest relationship is clearly with *M. potosiensis*, having the habit, markedly angled stems, and corolla of the latter, but differs in leaf shape and stem glabrousness.

Yécora is located in the Río Yaqui drainage of eastern Sonora in the Sierra Madre Occidental. Habitats ranging from grassland at 1540 m elevation near Yécora to pine-oak forests at 2200 m on Mesa el Campanero and relatively high rainfall (more than 1000 mm/yr) support a very diverse flora. Although species are shared with other floras including the tropical deciduous forests of western México and the grasslands of the Mexican Plateau, a substantial percentage are endemic to the central Sierra Madre from western Chihuahua and eastern Sonora south into Durango, and less so north into Arizona and New Mexico. New species described from the Yécora region since 1987 include *Acalypha burquezii* V.W. Steinm. & Felger, *Ageratina sandersii* B.L. Turner, *Ageratina yecorana* B.L. Turner, *Arceuthobium yecorense* Hawksworth & Wiens, *Berberis pimana* Laferr. & Marr., *Echinocereus datae* Laferr., *Euphorbia pionsperma* V.W. Steinm. & Felger, *Hymenocallis pimana* Laferr., *Pectis vandevenderi* B.L. Turner, *Pinus yecorensis* Debreczy & Ráca, *Senecio riomayensis* B.L. Turner, and *Tridax yecorana* B.L. Turner. Descriptions of new species of *Croton*, and *Hymenocallis*, (Victor M. Steinmann, Richard S. Felger, Joseph E.

Laferrière, pers. comm.) are in press while others in *Asclepias*, *Astragalus*, *Eleocharis*, *Macropodium*, *Rubus*, and *Sphacele* are under study (Mark Fishbein, Phil Jenkins, J. E. Laferrière, Eric Roalson, pers. comm.). Endemic species are especially concentrated on the relatively barren volcanic ash hills near Yécora, e.g., *Croton* sp. nov., *Mammillaria saboae* var. *haudeana* (A. Lau & Wagner) Glass & R. Foster, *Pectis vandevenderi*, *Tridax yecorana*, and now *Menodora yecorana*. The Municipio of Yécora is rapidly being recognized as an important center of endemism.

#### ACKNOWLEDGMENTS

We are grateful to Gayle Turner for the Latin diagnosis, and to her and Ted Delevoryas for reviewing the manuscript. Ana Lilia Reina Guerrero provided the specimens and helped in the field.

#### LITERATURE CITED

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